

HUMANIZATION OF NURSING CARE FOR PATIENTS WITH POLYTRAUMA IN THE INTENSIVE CARE UNIT: AN INTEGRATIVE REVIEW

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Abstract: Objective: to critically analyze contemporary evidence on the humanization of nursing care for patients with polytrauma in intensive care units, with an emphasis on clinical reasoning, safety and quality management. Method: an integrative review guided by Whittemore and Knafl and Mendes, Silveira and Galvão, with searches in PubMed/MEDLINE, LILACS, SciELO and the Virtual Health Library, between 2021 and August 29, 2026. The question was structured using the PICO strategy and selection was reported according to PRISMA 2020. Results: 32 studies comprised the synthesis, organized into four categories: person and family; pain, sedation, delirium, sleep and mobilization; polytrauma and neurotrauma; management and indicators. Conclusion: the humanization of critical polytrauma care constitutes a clinical and managerial safety strategy, dependent on nursing competencies, protocols, staffing and outcome monitoring.

Keywords: Humanization of Assistance; Intensive Care Units; Multiple Trauma; Critical Care Nursing; Patient-Centered Care.

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INTRODUCTION

The Intensive Care Unit (ICU) concentrates a high density of technology, continuous monitoring and decisions made within short time frames, necessary to sustain the lives of people with physiological instability. In patients with polytrauma, this complexity is heightened by the coexistence of injuries in different systems, the need for serial reassessment and the possibility of sudden deterioration. In this setting, humanization does not mean reducing technical rigor or replacing resuscitation priorities with exclusively relational approaches. It means integrating safety, communication, dignity, comfort, autonomy where possible, family participation and decisions proportionate to the patient's needs, preserving their personhood even when consciousness, speech and decision-making capacity are temporarily impaired (Secunda; Kruser, 2022; Hwang et al., 2025).

In the Brazilian context, the National Humanization Policy proposes transversality, shared responsibility, welcoming care and recognition of the individuals involved in care delivery. This perspective is particularly relevant to intensive care, a setting in which technology, urgency and task fragmentation may foster depersonalization. Applied to polytrauma, humanization must occur simultaneously with the control of life-threatening conditions and the prevention of secondary injuries, integrating a systematic approach to trauma, comprehensible communication and continuity of care (Brasil, 2013).

The epidemiological burden of trauma keeps this topic a public health priority. The World Health Organization estimates approximately 1,16 million annual deaths resulting from road traffic injuries and highlights the disproportionate impact on young and economically active people (World Health Organization, 2026). In Brazil, Souza et al. (2025) demonstrated an increase in hospitalizations due to land transport accidents between 2001 and 2021, while Malta et al. (2023) identified municipal and regional heterogeneity in mortality from transport injuries. The Brazilian profile in the Global status report on road safety 2023 complements this contextualization by situating the country within international road safety monitoring (World Health Organization, 2024). These findings reinforce the need for networks capable of integrating prehospital care, emergency care, operating rooms, ICUs, rehabilitation and



post-discharge follow-up.

Survival, however, is not the only relevant outcome. Critically ill patients may experience unrecognized pain, delirium, ICU-acquired weakness, sleep disturbances, psychological distress, fragmented memories and symptoms of post-traumatic stress. Family members may also develop anxiety, depression and stress symptoms related to hospitalization. Friberg et al. (2024) observed persistent post-traumatic stress symptoms in ICU survivors during the first year, and Gravante et al. (2024) demonstrated the repercussions of post-intensive care syndrome on the quality of life of patients and family members. In polytrauma, these phenomena may coexist with fractures, traumatic brain injury, amputations, stomas, functional loss, altered body image and prognostic uncertainty.

Nursing occupies a strategic position along this trajectory. Nurses remain at the bedside throughout the entire cycle of instability, interpret physiological trends, recognize signs of deterioration, organize priorities, implement and reassess interventions and coordinate communication among patients, families and the team. Trauma-specific studies demonstrate that nursing care encompasses neuromonitoring, pain management, positioning, mobility, prevention of pressure injuries and aspiration, wound care, fluid balance, nutrition, hygiene, self-care and preparation for care transitions (Ferreira et al., 2023; Figueiredo; Castro; Fernandes, 2024).

Despite this role, humanization is still frequently treated as a subjective dimension dissociated from care indicators. This separation creates a false opposition between technology and person-centered care. Recent evidence shows that structured communication, family presence guided by clinical criteria, systematic pain assessment, sedation with an explicit target, delirium screening, safe mobilization, sleep preservation and post-ICU planning can be monitored using process and outcome measures (Sosnowski et al., 2023; Barr et al., 2024; Lewis et al., 2025). Therefore, humanization can be incorporated into clinical governance and ICU quality management.

The gap underpinning this review lies in the fragmentation of the evidence. There is a substantial body of literature on person- and family-centered care, the ABCDEF bundle, communication, neurotrauma, multiple trauma and post-ICU syndrome, but studies that

simultaneously integrate humanization, polytrauma, the ICU and nursing decision-making are less frequent. To address this limitation without attributing evidence to polytrauma that does not directly pertain to it, this review distinguished trauma-specific evidence, contextual epidemiological evidence and cross-cutting ICU evidence with clinical applicability to patients with polytrauma.

Accordingly, the following research question was formulated: what recent scientific evidence guides the humanization of nursing care for adult patients with polytrauma in the ICU and what clinical and managerial implications can be derived for safety, quality and continuity of care? The study is justified by the need to organize a framework capable of supporting protocols, interprofessional rounds, communication with family members, delirium prevention, analgesia and sedation, mobilization, neuroprotection, discharge planning and quality indicators. The objective was to critically analyze the evidence published between 2021 and August 2026 on the humanization of nursing care for patients with polytrauma in the ICU, highlighting clinical reasoning, evidence-based decision-making, care safety and implications for hospital management.

METHODOLOGY

DESIGN AND METHODOLOGICAL FRAMEWORK

This is an integrative literature review with a critical-analytical approach. The method was chosen because it allows the integration of studies with different designs and facilitates a synthesis applicable to nursing practice. The review was conducted based on the framework of Whitemore and Knafl (2005) and the stages described by Mendes, Silveira and Galvão (2008): problem identification and question formulation; definition of the search strategy and sampling; determination of the information to be extracted; critical appraisal of the studies; interpretation of the results; and presentation of the synthesis. PRISMA 2020 was used as a transparency framework for reporting identification, screening, eligibility and inclusion, without characterizing this integrative review as a systematic review (Page et al., 2021).



The time frame covered January 1, 2021 to August 29, 2026. Classic methodological studies used to underpin the review method were not subject to this time frame, as their role was methodological and they were not included in the clinical synthesis of the 32 studies. Institutional documents from the World Health Organization, American Heart Association and Ministry of Health were used as supplementary normative or epidemiological sources and were not counted in the main scientific sample.

STRUCTURING THE RESEARCH QUESTION

The question was structured using the PICO strategy, appropriate for questions concerning clinical interests and context: P (population) = adult patients with polytrauma, severe trauma or traumatic brain injury; I (phenomenon of interest) = humanization of nursing care, including person- and family-centered care, communication, dignity, pain, sedation, delirium, sleep, mobilization, safety and continuity of care; Co (context) = Intensive Care Unit. The guiding question was: what recent scientific evidence guides the humanization of nursing care for adult patients with polytrauma in the ICU and what clinical and managerial implications can be derived for safety, quality and continuity of care?

INFORMATION SOURCES AND SEARCH STRATEGY

Searches were conducted in PubMed/MEDLINE, Latin American and Caribbean Health Sciences Literature (LILACS), Scientific Electronic Library Online (SciELO) and the Virtual Health Library (BVS). BVS was treated as a portal for retrieving information from multiple sources, including potential overlap with LILACS; for this reason, records were consolidated and deduplicated before screening. DeCS/MeSH descriptors and free-text terms in Portuguese and English were used, combined with AND and OR. In addition to the humanization-ICU-trauma core, a supplementary search was conducted for cross-cutting domains relevant to the humanization of care for critically ill patients with polytrauma, such as ABCDEF, pain, sedation, delirium, sleep, early mobilization and post-intensive care



syndrome.

Chart 1 – Search strategies used in the review

Database	Strategy
PubMed/MEDLINE	((("Unidades de Terapia Intensiva"[MeSH] OR "Cuidados Críticos"[MeSH] OR ICU[tiab]) AND ("Cuidado Centrado no Paciente"[MeSH] OR "cuidado centrado na família"[tiab] OR humanização[tiab] OR humanizaçã[tiab] OR dignidade[tiab] OR comunicação[tiab]) AND ("Traumatismo Múltiplo"[MeSH] OR politrauma[tiab] OR trauma[tiab] OR "lesão cerebral traumática"[tiab]) AND (enfermagem[tiab] OR "Enfermagem de Cuidados Críticos"[MeSH])) AND (2021:2026[pdat]))
BVS/LILACS	("Intensive Care Units" OR "Critical Care") AND ("Humanization of Care" OR "Patient-Centered Care" OR family OR communication OR dignity) AND ("Multiple Trauma" OR polytrauma OR trauma OR "Brain Injuries, Traumatic") AND (nursing OR "Critical Care Nursing")
SciELO	("intensive care unit" OR UTI) AND (humanization OR humanized OR family OR communication) AND (trauma OR polytrauma OR critical) AND nursing
Supplementary search	(ICU OR terapia intensiva) AND (ABCDEF OR dor OR delirium OR sedação OR sono OR mobilização precoce OR síndrome pós-terapia intensiva) AND (enfermagem OR família OR centrado no paciente) AND 2021–2026

Source: authors' own work, 2026.

ELIGIBILITY CRITERIA AND TRANSFERABILITY OF EVIDENCE

Scientific articles published between 2021 and August 29, 2026, in Portuguese, English or Spanish were included, involving adults in the ICU or evidence with justifiable clinical applicability to critically ill adults, provided that they addressed at least one of the following domains: humanization; person- or family-centered care; communication; dignity;



pain, analgesia, sedation, delirium, sleep or mobilization; post-intensive care syndrome; nursing care for multiple trauma; traumatic brain injury; trauma severity indicators; or quality management related to critical care. Guidelines published in journals were eligible when based on a formal process of evidence synthesis and grading.

To reduce inappropriate extrapolation, study applicability was defined a priori in three groups: a) direct evidence, when the population included multiple trauma, severe trauma or traumatic brain injury; b) transferable cross-cutting evidence, when the study involved adults in general ICUs and investigated processes whose applicability to polytrauma did not depend on a specific disease, such as communication, dignity, delirium, sedation, sleep and family presence; and c) contextual evidence, used exclusively to characterize epidemiology and the organization of trauma networks. Specific recommendations for polytrauma and neurotrauma were supported primarily by the direct evidence group.

Exclusively neonatal or pediatric studies, studies without applicability to the adult ICU, publications prior to 2021 intended for clinical synthesis, editorials, opinion pieces, commercial literature, exclusively technical reports without implications for nursing or humanization, and publications lacking sufficient information to characterize methods and results were excluded. Normative and methodological documents were retained only as supplementary references.

SELECTION PROCESS AND PRISMA FLOW DIAGRAM

Selection was conducted by the lead researcher in two sequential stages: screening of titles and abstracts and, subsequently, full-text review of potentially eligible studies. Inclusion and exclusion criteria were applied in a standardized manner, and reasons for full-text exclusion were recorded. The consolidated matrix used in the study retained 44 unique records after consolidation and deduplication of the searches. Seven were excluded based on titles and abstracts, 37 proceeded to full-text review, and five were excluded at that stage, two because the population was outside the scope, two because of the absence of a relevant outcome, and one because of methodological incompatibility. The final sample comprised 32

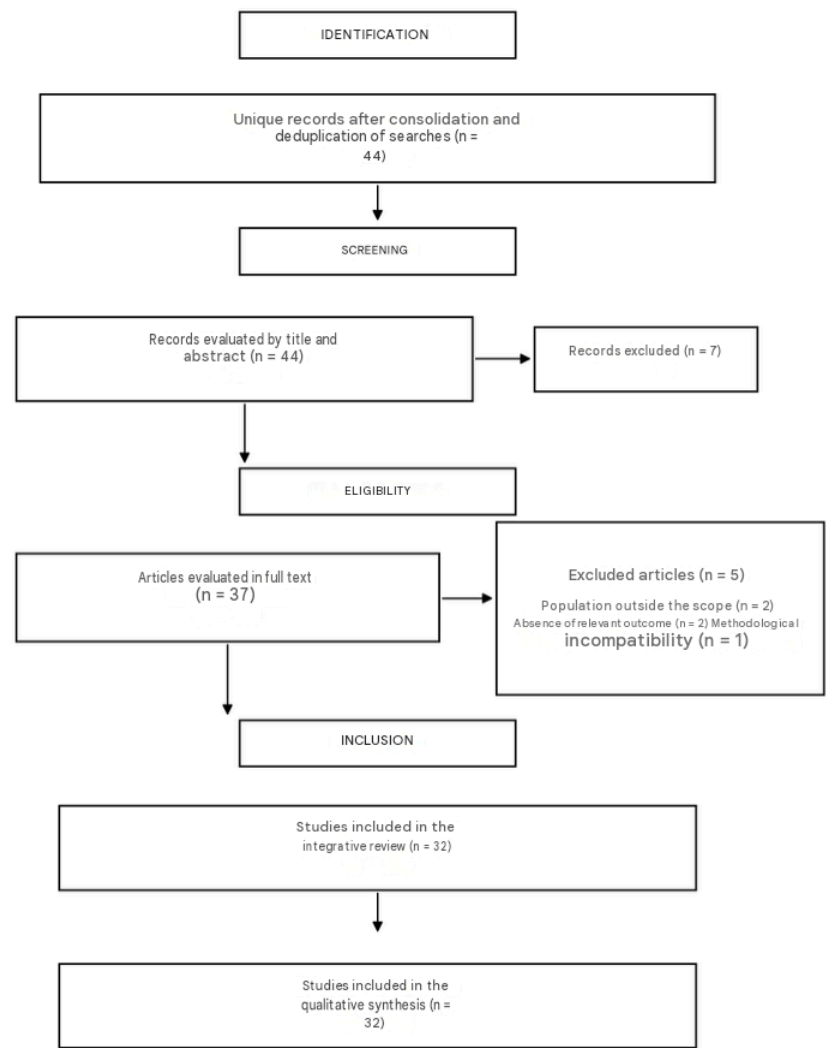


studies.

The search file available for this version retained the deduplicated records, but did not retain the raw number retrieved separately from each source or the number of duplicates removed before screening. To ensure methodological integrity, these values were neither retrospectively reconstructed nor estimated. Thus, the flow diagram presents the 44 unique records actually screened. This decision avoids attributing undocumented numbers to the process and is acknowledged as a limitation in the traceability of the identification stage.



Figure 1 – Study selection flow diagram, adapted from PRISMA 2020



Selection flow adapted from PRISMA 2020

Source: prepared by the author based on PRISMA 2020 (Page et al., 2021).

DATA EXTRACTION AND CRITICAL APPRAISAL

The following were extracted for each study: author and year; setting or country;



design; population or sample; phenomenon or intervention; main results; and applicability to patients with polytrauma. Critical appraisal was guided by the methodological domains described by JBI, considering the suitability of the design for the question, clarity of selection criteria, coherence between methods and analysis, control of bias where relevant, consistency of results, and support for conclusions. Given the heterogeneity of the designs, this appraisal was used to inform the critical interpretation of findings rather than to generate an overall quality score or numerical ranking of studies (Aromataris et al., 2024).

The design of each publication was retained as descriptive information and considered in the interpretation of results. Systematic reviews, meta-analyses, guidelines, trials, observational studies, qualitative research, scoping reviews, and integrative reviews address distinct questions and produce different types of evidence. For this reason, no bespoke categories of methodological superiority were created. The analysis jointly considered the internal coherence of each study, the nature of its design, and the direct, transferable, or contextual applicability of its findings to critically ill patients with polytrauma.

SYNTHESIS AND THEMATIC ANALYSIS

The heterogeneity of populations, interventions, and outcomes precluded conducting a meta-analysis. Data were organized into a comparative matrix and subjected to thematic synthesis. Four categories were defined: 1) humanization, dignity, communication, and family participation; 2) safety, comfort, and ICU liberation, including pain, sedation, delirium, sleep, and mobilization; 3) polytrauma, neurotrauma, and nursing clinical reasoning; and 4) hospital management, indicators, and continuity of care. In the discussion, convergent, complementary, and divergent findings were compared according to the nature of the evidence and its direct or transferable applicability to polytrauma.



ETHICAL ASPECTS

As this was a literature review based on published studies and publicly accessible documents, without recruitment, intervention, or collection of identifiable participant data, no direct research involving human subjects was conducted. Principles of scientific integrity, source traceability, appropriate citation, and non-fabrication of missing methodological data were observed. Data from government websites, available online, were used.

RESULTS

A total of 32 studies published between 2022 and 2026 were included. Regarding applicability to the subject of investigation, seven studies focused directly on multiple trauma, severe trauma, or traumatic brain injury; two epidemiological studies were used to contextualize trauma in Brazil; and 23 studies provided cross-cutting ICU evidence considered transferable to polytrauma in domains such as dignity, communication, family, pain, sedation, delirium, sleep, mobilization, and post-ICU syndrome.

The methodological distribution included systematic reviews and meta-analyses, qualitative meta-synthesis, clinical practice guidelines, a clinical trial, cohorts, implementation studies, qualitative studies, scoping and integrative reviews, a time series and an ecological study. This composition enabled the simultaneous examination of clinical outcomes, patient and family experience, bundle implementation, nursing practices and care organization, while preserving the distinction between trauma-specific evidence and cross-cutting intensive care evidence.

The synthesis identified four recurring core themes: person- and family-centered care; reduction of suffering and iatrogenic harm through analgesia, sedation, delirium prevention, sleep and mobilization; prevention of secondary injuries in trauma and neurotrauma; and organizational conditions required to translate humanization into measurable practice. Chart 2 presents the studies and their contribution to the review.



Chart 2 – Characteristics of the 32 included studies and contribution to the synthesis

Study	Design/context	Summary of findings	Applicability to polytrauma / nature of the evidence
Sili et al., 2023	Qualitative, 15 intensive care nursing professionals	Humanization understood as a holistic perspective, empathy, bonding, family and individualization; resources and training are determining factors.	Transferable. Conceptual basis of humanized care and organizational role.
Cezar; Del Castanhel; Grosseman, 2023	Qualitative/exploratory, 92 family members	Clarity, listening, accessible language and an appropriate environment shape family experience and suffering.	Transferable. Structured communication as a care intervention.
Secunda; Kruser, 2022	Clinical review	Person- and family-centered care is part of quality and faces barriers in high-technology environments.	Transferable. Integration of technology, values and shared decision-making.
Hwang et al., 2025	SCCM/GRADE guideline	Recommends liberalized family presence, education, structured communication, participation and barrier reduction.	Transferable. Contemporary reference for family policy in intensive care.
Reifarth; Borrega; Kochanek, 2023	Revisão de escopo	Maps communication strategies with family members and implementation requirements.	Transferable. Standardization of meetings and interprofessional communication.
Gunnlaugsdóttir et al., 2024	Systematic review of qualitative reviews	Families need information, proximity, participation, emotional reassurance and practical support.	Transferable. Family as a unit of care and partner in recovery.
Li et al., 2025	Systematic review/meta-analysis of randomized controlled trials	Communication interventions reduced anxiety, depression and post-traumatic stress disorder symptoms in family members, with a small effect on length of stay.	Transferable. Evidence of effectiveness for structured communication programs.

Barreto de Souza et al., 2024	Cluster-crossover clinical trial, 36 Brazilian intensive care units	Flexible visitation was associated with a lower prevalence of post-traumatic stress symptoms in family members at 12 months.	Transferable. Supports family presence policies when safe.
Crossfield et al., 2025	Systematic review	Telecommunication can expand access and support families, but depends on design, equity and integration into care.	Transferable. Complements physical presence and informational continuity.
Sun et al., 2024	Qualitative meta-synthesis	Dignity involves human integrity, autonomy, equality and environmental support.	Transferable. Privacy and achievable autonomy are quality outcomes.
Sili et al., 2024	Qualitative	Interpersonal relationships and the interprofessional team facilitate humanization; staff and material shortages hinder it.	Transferable. Links humanization to staffing and management.
Correya et al., 2025	Qualitative study with intensive care nurses	Gaps persist in the integrated use of pain, delirium and sedation scales.	Transferable. Need for training, policies, reminders and auditing.
Lewis et al., 2025	Clinical practice guideline/GRADE	Updates recommendations on anxiety, sedation, delirium, immobility and sleep in critically ill adults.	Transferable. Provides a framework for systematic assessment and reduction of iatrogenic harm.
Leong et al., 2025	Systematic review/meta-analysis	Pain, analgesia and delirium are interrelated; appropriate assessment and treatment are essential.	Transferable. Assessment-based analgesia and delirium monitoring.
Sosnowski et al., 2023	Systematic review/meta-analysis	The complete ABCDE/ABCDEF bundle is associated with better delirium and functional outcomes across studies.	Transferable. Humanization operationalized through a multimodal bundle.



Barr et al., 2024	Multicenter implementation cohort	ABCDEF reduced ventilation days and length of stay; mobility and family engagement were the most difficult components to sustain.	Transferable. Demonstrates the importance of leadership, data and sustainability.
Wang et al., 2023	Systematic review/meta-analysis	Early mobilization in ventilated patients reduced intensive care length of stay and ventilation duration in analyses, with a need for adverse event monitoring.	Transferable. Mobility requires safety criteria and individualization.
Daum et al., 2024	Systematic review/network meta-analysis	Mobilization within the first 72 h may reduce complications and length of stay, with heterogeneity across strategies.	Transferable. Supports early initiation when physiologically feasible.
Lee; Kim; Lee, 2025	Systematic review/meta-analysis	Programs involving nurses reduced ICU length of stay; the professional role remains poorly specified.	Transferable. Nurses as safety screeners and mobility coordinators.
Gorecki; Prasun, 2024	Quality improvement project	A sleep promotion bundle assessed delirium, agitation, restraint use and length of stay.	Transferable. The nighttime environment and sleep are incorporated into the humanized care plan.
Andrade et al., 2025	Revisão de escopo	Identified autonomous, nonpharmacological and interdependent interventions to reduce the risk of post-ICU PTSD.	Transferable. Humanization should prevent psychological trauma in addition to physical injury.
Gravante et al., 2024	Systematic review	PICS and PICS-F impair mobility, self-care, mental health and quality of life.	Transferable. Plan discharge and rehabilitation from the ICU onward.



Friberg et al., 2024	Longitudinal multicenter study	Elevated post-traumatic stress symptoms persisted and increased numerically up to 12 months in some survivors.	Transferable. Supports post-ICU screening and referral.
Figueiredo; Castro; Fernandes, 2024	Scoping review in critical TBI	Nursing interventions include neuromonitoring, therapeutic management, laboratory monitoring, education and family support.	Direct. Prevention of secondary injury in neurotrauma.
Muliira et al., 2024	Revisão de escopo	Families of people with TBI have informational, emotional and practical needs throughout recovery.	Direct. Discharge planning and family education should begin early.
Högvall et al., 2026	Qualitative, TBI survivors/family members	A diary written by nurses helped fill memory gaps and humanize the ICU experience.	Direct. Optional resource for narrative reconstruction and continuity.
Ferreira et al., 2023	Integrative review, multiple trauma	Mapped nursing interventions for mobility, elimination, immobility, nutrition, comfort and self-care.	Direct. Expands the care plan for patients with polytrauma.
Ferreira et al., 2024	Descriptive study using data from a Brazilian trauma center	Interoperable NANDA-I/NIC/NOC data supported care planning for mobility and complication prevention.	Direct. Data-driven decision-making and nursing standardization.
Fernandes et al., 2025	Retrospective cohort, 151 adults with trauma	ISS and NISS showed good discrimination for hospitalization and ICU admission.	Direct. Severity stratification supports prioritization and patient flow management.
Hickey; White; Gantz, 2024	Integrative review	Violence-related trauma requires emotional support, forensic evidence preservation, prevention of revictimization and staff support.	Direct. Humanization includes psychosocial safety and trauma-informed care.



Souza et al., 2025	Brazilian time series, 2001–2021	Hospitalizations due to transport accidents increased and remained predominantly male.	Epidemiological context. Quantifies potential demand for severe trauma care and rehabilitation.
Malta et al., 2023	Brazilian ecological study	Mortality from transport injuries varied by municipality, region and population size, particularly among motorcyclists.	Epidemiological context. Highlights inequalities and the need for regional trauma networks.

Source: authors' compilation based on the included studies, 2026.

HUMANIZATION, DIGNITY, COMMUNICATION AND FAMILY PARTICIPATION

Qualitative studies, reviews and guidelines identified humanization as recognition of the person beyond the diagnosis and devices. Sili et al. (2023) associated humanized care with comprehensiveness, empathy, bonding, family and individualization; Sun et al. (2024) identified autonomy, equality, integrity and environmental support as components of dignity. Taken together, the studies described privacy, explanation of procedures, understandable language and recognition of preferences as recurring elements of person-centered care.

Communication with family members was associated with experience and mental health. Cezar, Del Castanhel and Grosseman (2023) identified the need for clarity, listening and accessible language; Reifarth, Borrega and Kochanek (2023) mapped structured communication strategies; Li et al. (2025) observed reductions in anxiety, depression and post-traumatic stress symptoms with communication interventions; and Hwang et al. (2025) recommended liberalized family presence, education and participation when clinically feasible. In Brazilian ICUs, Barreto de Souza et al. (2024) found a lower prevalence of post-traumatic stress symptoms among family members following a flexible visitation strategy.



SAFETY, COMFORT, PAIN, SEDATION, DELIRIUM, SLEEP AND MOBILIZATION

Cross-cutting ICU evidence showed interdependence among pain, sedation, delirium, immobility and sleep. Lewis et al. (2025) updated recommendations for these domains, while Correya et al. (2025) identified barriers to the integrated use of pain, delirium and sedation scales. Leong et al. (2025) demonstrated an association among pain, analgesic exposure and delirium, reinforcing the need for systematic assessment and reassessment after interventions.

The ABCDEF bundle encompassed pain assessment, spontaneous awakening and breathing, choice of sedation, delirium prevention and management, mobilization and family engagement. Sosnowski et al. (2023) identified benefits of the bundle for delirium and functional status, and Barr et al. (2024) observed reductions in ventilation days and length of stay following large-scale implementation, although mobility and family engagement proved more difficult to sustain.

Reviews of early mobilization indicated reductions in ventilation duration or length of stay in some analyses, with heterogeneity across protocols and a need for adverse event monitoring (Wang et al., 2023; Daum et al., 2024; Lee; Kim; Lee, 2025). Gorecki and Prasun (2024) included sleep, delirium, agitation, restraint and length of stay in a quality improvement project aimed at promoting sleep.

POLYTRAUMA, NEUROTRAUMA AND NURSING INTERVENTIONS

In studies directly related to trauma, Figueiredo, Castro and Fernandes (2024) mapped nursing interventions for severe traumatic brain injury, including neuromonitoring, treatment, laboratory monitoring, staff training and family support. Ferreira et al. (2023) identified interventions addressing mobility, elimination, nutrition, comfort and self-care in patients with multiple injuries, while Ferreira et al. (2024) demonstrated the utility of interoperable nursing data for care planning and complication prevention.

Fernandes et al. (2025) observed the discriminatory ability of the ISS and NISS indices for hospitalization and ICU admission. Muliira et al. (2024) identified informational,

emotional and practical needs among families of people with traumatic brain injury. Högvall et al. (2026) described the use of nurse-written diaries as a resource for narrative reconstruction following TBI. Hickey, White and Gantz (2024) added trauma-informed care needs for injuries resulting from violence.

HOSPITAL MANAGEMENT AND QUALITY-OF-CARE INDICATORS

The studies showed that human and material resources, interprofessional work and training influence the implementation of humanized practices. Sili et al. (2024) identified shortages of staff and materials as barriers, and Barr et al. (2024) showed that bundle sustainability depends on leadership, workflow integration and data monitoring.

Based on the synthesis, indicators were organized according to structure, process and outcome. Structure included the availability of protocols, scales, training and an environment conducive to communication; process included pain assessment, sedation targets, delirium screening, mobility, family communication, restraint review and transition planning; outcomes included safety events, ventilation duration and length of stay, readmission, experience, functional status and post-ICU symptoms.

Chart 3 – Suggested indicators for managing the humanization of care for patients with polytrauma in the ICU

Dimension	Indicator	Suggested operational definition
Structure	Availability of protocols and validated scales	Percentage of beds with standardized access to NRS/CPOT/BPS, RASS, CAM-ICU/ICDSC and trauma protocols.
Structure	Staff training	Annual training coverage in humanization, trauma, communication, delirium and safe mobilization.
Structure	Environment and family	Availability of a private communication area, a family presence policy and telehealth resources.

Process	Pain	Percentage of eligible patients whose pain is assessed and reassessed after intervention within the institutionally defined interval.
Process	Sedation	Percentage of ventilated patients with a defined sedation target and documented RASS-target concordance.
Process	Delirium	Percentage of eligible patients screened at least once per shift according to institutional protocol.
Process	Mobility	Percentage of eligible patients with a defined daily mobility level and documented progression.
Process	Family	Percentage of families receiving structured communication and having their needs documented within the first 24–48 h.
Process	Restraint	Prevalence of physical restraint and percentage of reassessments of its necessity.
Process	Transition	Percentage of severe trauma survivors with a rehabilitation, education and follow-up plan before discharge.
Outcome	Safety	Pressure injuries, unplanned extubation, falls, device-related events and healthcare-associated infections.
Outcome	Clinical efficiency	Days of mechanical ventilation, ICU/hospital length of stay and early readmission.
Outcome	Experience	Patient/family satisfaction, understanding of the therapeutic plan and perception of dignity.
Outcome	Recovery	Functional status, persistent pain and screening for symptoms of anxiety, depression or post-ICU PTSD.

Source: author's proposal based on the synthesis of evidence. Numerical targets should be defined locally according to the care profile, clinical eligibility, resources and risk.



DISCUSSION

HUMANIZATION AS A COMPONENT OF QUALITY AND SAFETY

The synthesis demonstrates that humanization is not a dimension parallel to intensive care, but a component of its quality. Secunda and Kruser (2022) position person- and family-centered care as an attribute of care delivery, while Sili et al. (2023) emphasize comprehensiveness, empathy and individualization. Sun et al. (2024) broaden this understanding by demonstrating that dignity encompasses autonomy, equality and integrity. The convergence of these findings shifts humanization from a notion of cordiality to an organizing principle for decisions regarding risk, information, comfort and preferences.

Lewis et al. (2025) reinforce this interpretation by incorporating pain, sedation, delirium, immobility and sleep into evidence-based clinical guidelines. If unrecognized pain, unidentified delirium and unnecessarily deep sedation cause suffering and may alter outcomes, their systematic assessment is simultaneously a technical and humanizing action. Correya et al. (2025), however, show that knowledge of assessment scales does not guarantee their implementation, indicating that the gap shifts from the availability of evidence to the organizational capacity to incorporate it into care.

In polytrauma, any humanizing strategy must respect physiological priorities. Hemorrhagic shock, intracranial hypertension, complex ventilation or the need for multiple procedures may require management incompatible with usual mobilization or light sedation targets. Evidence-based humanization does not consist of applying interventions uniformly, but of justifying their indications, recognizing contraindications, reassessing daily and discontinuing iatrogenic practices when they are no longer necessary.

FAMILY AND COMMUNICATION AS CLINICAL PROCESSES

Hwang et al. (2025) recommend family presence and structured communication when safe and feasible. Cezar, Del Castanhel and Grosseman (2023) demonstrate, in the Brazilian context, that family members value clarity, consistency and opportunities for



participation. Reifarth, Borrega and Kochanek (2023) complement these findings by indicating that communication quality depends on organization and regularity, and Li et al. (2025) demonstrate measurable effects on family psychological distress.

This evidence indicates that an isolated clinical update is insufficient in cases of complex polytrauma. The communication process should have a designated professional contact, regularity, accessible language and opportunities for questions. Nursing occupies a privileged position to identify gaps in understanding, explain procedures within its scope of practice and communicate changes to the team. Barreto de Souza et al. (2024) add evidence of the benefits of flexible visitation, but Hickey, White and Gantz (2024) note that violence-related trauma may require assessment of safety, privacy and the risk of revictimization. Therefore, flexibility should be individualized, rather than confused with an absence of criteria.

PAIN, SEDATION, DELIRIUM AND SLEEP: REDUCING AVOIDABLE SUFFERING

Leong et al. (2025) demonstrate interrelationships among pain, analgesia and delirium, and Lewis et al. (2025) recommend a structured approach to these phenomena. For nursing, the decision-making process should consider the capacity for self-report, selection of an appropriate instrument, intervention, reassessment, the sedation target and delirium screening. In patients unable to communicate pain, validated behavioral instruments, such as CPOT or BPS, may be used according to institutional protocols; sedation may be monitored using RASS and delirium using CAM-ICU or ICDSC when applicable.

Sosnowski et al. (2023) and Barr et al. (2024) converge in indicating that ABCDEF operationalizes this reasoning within an interprofessional strategy. The implementation study by Barr et al. demonstrates, however, that relational and mobility components are more difficult to sustain. This difference between potential efficacy and actual implementation justifies component-specific auditing, discussion of barriers and workflow adaptation.

Gorecki and Prasun (2024) include sleep in this system. In polytrauma, monitoring should not be reduced, but avoidable interruptions may be clustered and noise, lighting and



alarms may be managed. The principle is to distinguish necessary surveillance from disruption without clinical benefit.

MOBILIZATION AND FUNCTIONAL STATUS: EARLY INITIATION CONDITIONED ON SAFETY

Wang et al. (2023), Daum et al. (2024) and Lee, Kim and Lee (2025) demonstrate potential benefits of early mobilization for length of stay or ventilation in different critically ill populations, but also heterogeneity and the need for adverse event surveillance. In polytrauma, the concept of early mobilization must be contingent on hemodynamic, neurological and orthopedic stability, weight-bearing restrictions, devices and neuroprotection goals.

Ferreira et al. (2023) show that mobility is interconnected with elimination, nutrition, comfort and self-care. Ferreira et al. (2024) demonstrate that standardized data can connect diagnoses, interventions and outcomes. These findings reinforce that mobilization should be integrated into the nursing process with documented eligibility criteria, objectives, responses and reassessment. The continuous presence of nurses enables recognition of both changes that make mobilization unsafe and situations in which restriction is no longer justified.

NEUROTRAUMA, CONSCIOUSNESS AND DIGNITY

Figueiredo, Castro and Fernandes (2024) demonstrate that nursing care in critical traumatic brain injury involves preventing secondary injuries through monitoring and early intervention. This includes surveillance of oxygenation, perfusion, pupils, level of consciousness, temperature, positioning, sedation and intracranial variables when available. Assessment should be serial and interpreted in terms of trends, as changes resulting from sedatives, pain, hypoxemia, hypercapnia, shock or metabolic disturbances may mimic or mask neurological deterioration.

Patients with reduced consciousness face an additional risk of depersonalization. Sun



et al. (2024) maintain that dignity is related to how the body and identity are treated even when full autonomy is suspended. Procedures should be announced, privacy preserved, bodily exposure minimized and pain assessment tools adapted to the inability to communicate. Högvall et al. (2026) and Muliira et al. (2024) show that narrative and family needs persist beyond the critical phase, reinforcing early transition planning.

INTEGRATION WITH PREHOSPITAL CARE, OMS AND AHA

The humanization of care for patients with polytrauma begins before the ICU. World Health Organization emergency care tools include systematic assessment, structured communication and transfer checklists, elements compatible with continuity across prehospital care, the emergency department, the operating room and the ICU (World Health Organization, 2025). A high-quality handoff should preserve the mechanism of injury, previous interventions, hemodynamic response, airway, ventilation, blood loss, blood components, neurological findings, immobilization measures, allergies, medications and adverse events.

The 2025 American Heart Association resuscitation guidelines update basic and advanced life support and systems of care (American Heart Association, 2025). In traumatic cardiac arrest, however, reasoning must remain etiological and integrated with specific trauma protocols, prioritizing reversible causes such as hemorrhage, hypoxia and obstructive mechanisms. The AHA, therefore, complements, but does not replace, the trauma-specific approach.

IMPLICATIONS FOR NURSING PRACTICE AND HOSPITAL MANAGEMENT

For clinical care, the findings support four complementary actions: stabilizing and recognizing risk; reducing suffering and iatrogenic harm; keeping patients and families informed and involved within clinical limits; and planning transition and recovery from admission onward. The first action includes hemodynamic, ventilatory and neurological



monitoring, hemorrhage control, prevention of hypothermia and identification of deterioration. The second includes pain, sedation, delirium, restraints, sleep, skin, positioning and mobility.

For management, humanization should be incorporated into clinical governance through protocols, responsibilities, continuing education, documentation and indicators. The proposed dashboard enables the combination of experience, safety and efficiency. For example, greater adherence to delirium screening should be interpreted alongside delirium prevalence, deep sedation, restraint use and duration of ventilation, avoiding isolated indicators without clinical meaning.

Sili et al. (2024) demonstrate that a lack of human and material resources limits humanized practices, while Barr et al. (2024) show that the sustainability of bundles depends on leadership and integration into workflow. These findings reinforce that individual behavior cannot indefinitely compensate for an under-resourced system. Nursing leadership should monitor workload, training, protocol availability and actual implementation conditions.

STUDY LIMITATIONS

The first limitation is the scarcity of studies that integrate polytrauma, ICU care, humanization, and nursing within the same design. Therefore, the review combined seven studies directly related to trauma or TBI, two contextual epidemiological studies, and 23 cross-sectional ICU studies. Although transferability criteria were explicitly stated, recommendations derived from general ICU settings should be applied to polytrauma using clinical judgment and respecting hemodynamic, neurological, and orthopedic specificities.

The second limitation is the heterogeneity of designs, populations, and outcomes, which precluded conducting a meta-analysis. Critical appraisal was guided by JBI methodological domains, without assigning an overall score or establishing a hierarchy among designs. The third limitation is that screening was performed by the lead researcher, without independent selection by two reviewers, which may increase the risk of selection bias.

The fourth limitation concerns the traceability of identification. The available matrix

retained 44 unique records after consolidation and deduplication, but did not retain the raw total from each source or the number of duplicates removed before screening. These values were not retrospectively estimated. The fifth limitation is the predominance of international evidence. Because this was an integrative review, rather than a systematic review, no protocol was registered in PROSPERO; this characteristic should be considered when comparing the present study with systematic reviews with registered protocols. Brazilian multicenter studies specifically addressing polytrauma in the ICU remain necessary.

CONCLUSION

The objective was achieved by integrating contemporary evidence on the humanization of nursing care for patients with polytrauma in the ICU and demonstrating that humanization in critical care constitutes a clinical, ethical, and managerial strategy. Quality care combines a systematic approach to trauma and prevention of secondary injuries with assessment-based analgesia, target-directed sedation, delirium screening, sleep promotion, mobilization contingent on stability, understandable communication, individualized family participation, and preservation of dignity.

Nursing occupies a central position because it transforms continuous data into decisions, recognizes suffering that cannot always be verbalized, and coordinates interventions and transitions. Protocols should support, rather than replace, clinical judgment. In polytrauma, goals for sedation, mobility, and family presence must be individualized according to shock, neuroprotection, procedures, orthopedic restrictions, and response to treatment.

For hospital management, incorporating humanization into the quality system is recommended, with structure, process, and outcome indicators, adequate staffing, continuing education, interprofessional rounds, and rehabilitation pathways. Future research should test trauma-adapted bundles and relate humanization indicators to clinical, economic, functional, and experience outcomes, including follow-up for post-ICU syndrome.



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